IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF UTAH

UNION PACIFIC RAILROAD CO., **Plaintiff,** **vs.** **UTAH STATE TAX COMMISSION; JOHN L. VALENTINE, COMMISSIONER and Chair of the UTAH TAX COMMISSION; and THE STATE OF UTAH,** **Defendants,** **vs.** **BEAVER COUNTY, BOX ELDER COUNTY, CARBON COUNTY, EMERY COUNTY, GRAND COUNTY, MILLARD COUNTY, SALT LAKE COUNTY, AND TOOELE COUNTY,** **Intervenor Defendants.**	**FINDINGS OF FACT** **&** **CONCLUSIONS OF LAW** **Case No. 2:18-CV-00630-DAK** **Judge Dale A. Kimball**

I. INTRODUCTION

This matter is before the court pursuant to the Railroad Revitalization and Regulatory Reform Act of 1976, currently codified at 49 U.S.C. § 11501 (the "4-R Act"). Union Pacific Railroad ("UPRR") seeks injunctive relief under the 4-R Act to prevent the collection of property taxes based on an alleged discriminatory property tax assessment for the 2018 tax year. Under the 4-R Act, discrimination occurs when the ratio of assessed value to true market value for a railroad's taxable, operating property exceeds, by at least 5%, the ratio of assessed value to true

market value for other commercial and industrial property in the assessment jurisdiction—in this case, Utah. 49 U.S.C. § 11501(b)(1) and (c).[1]

The Court held a bench trial via Zoom beginning January 25, 2021, and ending on February 8, 2021. During the hearing: David J. Crapo and John T. Deeds represented UPRR; John C. McCarrey, Michelle A. Lombardi and Bryant T. Hinckley represented Defendants Utah State Tax Commission (the "Commission"), Commissioner John L. Valentine, and the State of Utah (collectively "State Defendants"); Timothy A. Bodily and Bridget K. Romano represented Salt Lake County; and Thomas W. Peters and David W. Scofield represented the remaining counties (the intervening counties are collectively referred to herein as the "Counties").

II. PROCEDURAL HISTORY

The Commission is responsible for the annual assessment of rail transportation property in the State of Utah. Utah Code §§ 59-2-201 et seq. Although Utah law requires the Commission to impose a property tax on 100% of the fair market value of all tangible taxable property located within the state, such an assessment would, nevertheless, violate the 4-R Act if the ratio of assessed value to the true market value of UPRR's operating properties is at least 5% greater than the ratio of assessed value to the true market value of other commercial and industrial property.

To comply with the 4-R Act, the Commission performs an annual Railroad Ratio Study designed to derive an assessment ratio for other commercial and industrial property in the state (the "4-R Act Ratio"). That ratio is then applied to the true market value determination for a railroad's operating properties to comply with the 4-R Act Ratio requirement.

[1] The 4-R Act uses the phrase "true market value" rather than "fair market value." However, the terms are synonymous and interchangeable. *Burlington N. R. Co. v. Lennen*, 573 F. Supp. 1155, 1161 (D. Kan. 1982), aff'd, 715 F.2d 494 (10th Cir. 1983).

On or about May 1, 2018, the Commission issued its 2018 property tax assessment to UPRR wherein it determined that the system value of UPRR's operating property throughout the United States was $[redacted]. After allocating [redacted]% of the UPRR's system value to Utah, the Commission removed previously taxed motor vehicles and then reduced its assessment of UPRR's taxable property by 7.48% as a 4-R Act adjustment based on the annual Railroad Ratio Study, resulting in an estimated true market value of $1,552,959,050 for UPRR's taxable, tangible operating properties located in Utah (the "2018 Assessment").

On August 10, 2018, UPRR filed a 4-R Act proceeding in this court, claiming that the State Defendants had significantly over-assessed UPRR's property resulting in a ratio of assessed value to true market value that exceeded the ratio for other commercial and industrial properties in the state by more than 5%. UPRR did not challenge the Commission's calculation of the 4-R Act Ratio.

On September 24, 2018, this court signed an order approving an agreement between UPRR and the State Defendants wherein UPRR would only pay the undisputed portion of its property taxes. UPRR would also put the disputed portion in an escrow account for future disbursement to the Counties or the disputed portion would be refunded to UPRR depending on the true market value determination made by this court.

On October 26, 2018, the Counties moved to intervene in this proceeding and this court granted the Counties' motion on January 2, 2019. The Counties filed their Answer to UPRR's Complaint on March 14, 2019, and asserted a single crossclaim against the Commission. In their crossclaim, the Counties assert that UPRR's operating property had been under assessed and that the true market value of UPRR's taxable property located in Utah was at least $2,200,000,000.

III. DISCUSSION

UPRR's challenge under the 4-R Act makes this case essentially a valuation case. As a general matter, valuation cases depend almost entirely upon a court's factual determinations. There are, however, a few legal issues that the court needs to resolve. It makes the most sense for the court to resolve these minor legal issues as they arise alongside the factual issues in this case. Accordingly, this Order will not follow the typical format by dividing the Discussion section into findings of fact and conclusions of law. Most of the legal findings will be addressed within their separate, relevant sections. With that in mind, this Order will proceed by discussing: (A) the 4-R Act and the burden of proof; (B) the Commercial and Industrial Ratio; (C) the Railroad Ratio; and then (D) make ultimate conclusions regarding UPRR's Utah taxable value.

A. The 4-R Act & The Burden of Proof

Congress passed the 4-R Act in 1976 in an effort to "restore the financial stability of the railway system." 49 U.S.C. § 11501. Congress observed that railroads were "easy prey for State and local tax assessors in that they are nonvoting, often nonresident, targets for local taxation, who cannot easily remove themselves from the locality." *W. Air Lines, Inc. v. Bd. of Equalization of S.D.*, 480 U.S. 123, 131 (1987) (citation and internal quotation marks omitted). Congress was concerned with the disproportionately excessive taxation of railroads which were forced to litigate in multiple jurisdictions to achieve some degree of fairness. *See Burlington N. R.R. v. Okla. Tax Comm'n*, 481 U.S. 454, 457 (1987).

Relevant here, the 4-R Act identifies several categories of prohibited, discriminatory taxation. Specifically, Section 11501(b)(1) prohibits taxing authorities from "[a]ssess[ing] rail transportation property at a value that has a higher ratio to the true market value of the rail transportation property than the ratio that the assessed value of other commercial and industrial

property in the same assessment jurisdiction has to the true market value of the other commercial and industrial property." 49 U.S.C. § 11501(b)(1). Under 49 U.S.C. § 11501(c), an assessment is discriminatory when "the ratio of assessed value to true market value of rail transportation property exceeds by at least 5 percent the ratio of assessed value to true market value of other commercial and industrial property in the same assessment jurisdiction." Furthermore, "[i]n order to apply the [4-R] Act, district courts have original jurisdiction to calculate the true market value of in-state railroad property. . . . [and] cannot undertake the comparison of ratios the statute requires without that figure at hand." *CSX Transp., Inc. v. Georgia State Bd. of Equalization*, 552 U.S. 9, 16 (2007).

Under the 4-R Act, "[t]he burden of proof in determining assessed value and true market value is governed by State law." 49 U.S.C. § 11501(c). Under Utah law, "no deference or presumption of correctness [is given] to any previous Commission assessment" in a de novo proceeding. *T-Mobile USA, Inc. v. Utah State Tax Comm'n*, 254 P.3d 752, 758 (Utah 2011). Here, UPRR and the Counties have challenged the Commission's calculation of the true market value of UPRR's property in the original proceeding. Consequently, each party to this proceeding, including the State Defendants, bears the burden "to show by a preponderance of the evidence that its proposed valuation is more accurate than any other value." *Id.* at 758–59.

B. C&I Ratio: The Sales Ratio Study

As briefly noted above, the 4-R Act requires the court to compare two ratios to determine if discriminatory taxation has occurred. These ratios are the ratio of assessed value to the true market value of other commercial and industrial properties ("C&I Ratio") and the ratio of a railroad's assessed value to its true market value ("RR Ratio").

UPRR and the State Defendants argue that only the RR Ratio is in dispute in this case since these parties stipulated to the C&I Ratio for the 2018 tax year. The Counties, however, contend that UPRR has a "threshold" burden of proving the assessed value of commercial and industrial property before it can proceed with its 4-R Act claim. The court disagrees with the Counties for two reasons.

First, there is no language in the 4-R Act—or any other legal authority—that supports the idea that a railroad would have to prove the reliability or accuracy of a state's taxation of other commercial and industrial property. As a general, practical matter, such a holding would place an unreasonable burden upon a railroad company any time it brings a challenge of discriminatory taxation under the 4-R Act. A railroad company may choose to bring a challenge to a state's C&I Ratio but it is not compelled to do so under Utah or federal law. Additionally, the C&I Ratio in this matter is the culmination of decades of litigation and agreements between the State Defendants and UPRR. The Counties argument would require the court to undo or overrule multiple agreements and cases. The court is unwilling to do so absent more compelling evidence showing that the C&I Ratio is inaccurate or the law otherwise mandates that UPRR carry such a burden of proof.

Second, the Counties' position incorrectly states the burden of proof in these types of cases. As noted, under the 4-R Act, Utah law governs whether UPRR must prove the accuracy of the C&I Ratio. Utah Law does not place that burden on UPRR. Under Utah law, in cases challenging the State's tax assessment, a "party's burden is to show by a preponderance of the evidence that its proposed valuation is more accurate than any other value." *T-Mobile USA, Inc.*, 254 P.3d at 759 (Utah 2011). This language would place the burden upon the Counties to establish that their own C&I Ratio is more accurate than the current ratio. Since the Counties did

not put forth any evidence of a different value or ratio, the court will not disturb the C&I Ratio in this case.

Finally, even assuming that UPRR needed to establish the accuracy of the C&I Ratio, the court finds that UPRR carried that burden for the 2018 tax year. To carry this burden, UPRR would have needed to establish that the C&I Ratio was done "through the random-sampling method known as a sales assessment ratio study" and "carried out under statistical principles applicable to such a study." 49 U.S.C. § 11501(c). UPRR met this burden.

For the 2018 tax year, the C&I Ratio was guided by a Stipulated Order of Partial Settlement entered by the Federal District Court for the District of Utah in 1988, (the "1988 Stipulated Order"). *See Union Pacific R.R. v. State Tax Comm'n of Utah*, 716 F. Sup. 543, 546 (D. Utah 1988) (referencing the 1988 Stipulated Order). This 1988 Stipulated Order sets forth the procedures for determining the value of commercial and industrial property. *Id.* at 546, 565 n.55. According to the 1988 Stipulated Order procedures, the C&I Ratio is derived by weighting the ratios of four categories of commercial and industrial properties: (1) centrally assessed mining and gas properties, (2) other centrally assessed properties, (3) locally assessed personal properties, and (4) locally assessed real properties. *Id.* at 564, n.49.

Based on the 1988 Stipulated Order, centrally assessed properties (the first two categories) are assumed to be assessed at 100% of their true market value. This assumption is proper because centrally assessed properties like large utilities and mines are rarely sold, making it difficult—if not impossible—to prepare a sales ratio for this type of property.

Similar to centrally assessed property, the Commission makes an assumption abut locally assessed commercial and industrial property. The Commission assumes the commercial and industrial property has a ratio of 86.77%. This ratio is based on personal property audits

conducted from 1991 through 1995 and agreed to by the Commission and UPRR in 2014 (the "2014 Agreement"). The Counties argue this ratio is wrong because the study is old and, according to Mr. Eyre (the Counties' valuation expert), the audits were not random. The court is unpersuaded by these arguments. First, the counties offered no proof that the age of the study makes it less reliable. Second, besides Mr. Eyre's unsupported testimony, the Counties offered no proof to support their claim that the study was not random. The court finds these unsupported allegations are insufficient to disprove this portion of the C&I Ratio.

Pursuant to the 2014 Agreement, the Commission and UPRR work together to determine the proper ratio for the last category, locally assessed personal property. For the locally assessed real property, the Commission and UPRR look at the prior year's arms-length transactions from a sample of property transfers from across the state. Ms. Jones, who conducts the ratio study for the Commission, testified that this ratio is based on statistical principles and that she used dollar-weighted means from 296 transactions to select her estimate. Ms. Jones arrived at a ratio of 96.34% for locally assessed real property. UPRR derived its ratio using the same methods but considered five additional transactions and recommended using the enrolled assessed values after the county boards of equalization had made adjustments. UPRR arrived at an 86.7% ratio for locally assessed real property.

Once each ratio is determined, the value of each of the four categories is totaled. The category's percentage is then multiplied by its assessment level or ratio, producing a weighted assessment ratio. The weighted assessment ratios are then summed to derive the C&I Ratio. Below is the court's version of the table demonstrating the Commission's 2017 C&I Ratio, which would be used for the 2018 tax year.

Category	Total State Value	Percent of Total	Assessment Level or Ratio	Weighted Assessment Ratio
Oil, Gas, & Mines	$7,080,595,910	7.63%	1.000	7.63
Other Centrally Assessed Property	$14,097,131,938	15.2%	1.000	15.20%
Locally assessed Personal Property	$16,869,025,356	18.19%	.8677	15.78%
Locally Assessed Real Property	$54,696,361	58.98%	.9634	56.82%
Total	$92,743,692,564	100%	--	**95.43%**

As demonstrated, the Commission arrived at a 95.43% C&I Ratio. UPRR, on the other hand, independently arrived at an overall state C&I Ratio of 89.6%. The Commission and UPRR subsequently agreed to a C&I Ratio of 92.52%, which represents a midpoint between the Commission and UPRR's studies. The Counties argue that because the Commission and UPRR stipulated to this figure that it is unreliable and not statistically based. The court disagrees.

The evidence demonstrated that both the Commission and UPRR's ratios were prepared using statistical principles and practices. The ultimate 92.52% was similarly derived using statistical principles. Averaging two statistically derived, reasonable ratio figures is a common practice. In fact, the Counties' expert frequently averaged figures to arrive at his ultimate conclusions. Further, as another practical consideration, to conclude that this is an unreliable figure would discourage the parties from compromising and working together to determine the C&I Ratio each year.

Thus, for the foregoing reasons, the court upholds the Commission's 2018 C&I Ratio and finds that UPRR did not need to prove the accuracy of the C&I Ratio as a threshold burden in its 4-R Act claim. The Counties' claim that such a burden exists has no support in the law. Furthermore, even assuming such a burden is required, UPRR proved by preponderance that the figure is reliable. The existing C&I Ratio is also the necessary default since the Counties did not even attempt to produce evidence of a more reliable C&I Ratio.

C. The RR Ratio: True Market Value of UPRR's Property

The valuation of UPRR's taxable, tangible properties is the whole of this case. During trial, the parties' valuation experts, Dr. Heaton, Mr. Eyre, and Mr. Hales, offered opinions regarding the fair market value of UPRR's tangible operating property for *ad valorem* taxation as of the lien date, January 1, 2018.

After using several different valuation methods, Mr. Hales and the Commission placed 100% weight on the income indicator of value and arrived at a system value of $[redacted] for UPRR on the lien date. Mr. Hales then made only a deduction for computer software, because he believed it constituted intangible property, to arrive at UPRR's tangible system value of $[redacted]. To arrive at his Utah value, Mr. hales made deductions to account for the Utah allocation, locally assessed vehicles, and the 4-R Act to arrive at a final taxable value of UPRR's operating property for the State of Utah of $1,552,959,050 on the lien date.

Using the income indicator method only, UPRR's expert, Dr. Heaton, arrived at a system value of $[redacted] for UPRR in 2018. Dr. Heaton then made deductions for exempt intangible property: $[redacted] for computer software and $[redacted] for a trained and assembled workforce. These deductions resulted in a system unit value (excluding intangible property) of $[redacted]. To arrive at his Utah value, Dr. Heaton made the typical deductions to account for the Utah allocation, locally assessed vehicles, and the 4-R Act to arrive at a final taxable value of UPRR's operating property for the State of Utah of $812,477,643 on the lien date.

As an expert for the Counties, Mr. Eyre calculated a system value for UPRR at $[redacted]. This final system value is based on reconciling his Yield Capitalization ("Yield

Cap") model (98%), the stock and debt approach (1%), and the Earnings Before Interest, Taxes, Depreciation, and Amortization ("EBITDA") Multiplier approach (1%). Mr. Eyre made deductions for intangible software in his Yield Cap and EBITDA approaches but not in his stock and debt approach. Additionally, the total deduction for intangibles was different in his Yield Cap ($695,132,194) and EBITDA ($752,467,881) because he used a market-to-book ratio to value the intangible property. (*See* Ex. C-13, C-11.) Since these deductions were made before reconciling his system values, the intangible property deductions were not obvious in Mr. Eyre's exhibits. After obtaining his system value, Mr. Eyre made deductions to account for UPRR's Utah allocation, locally assessed vehicles, and the 4-R Act to arrive at his conclusion that the taxable value of UPRR's tangible operating property in Utah was $2,221,115,735 on the lien date.

These three experts' valuation estimates are summarized in the following table. The table includes only the calculations upon which the respective experts placed any weight.[2] As noted above, Mr. Eyre made his intangible property deduction differently and, therefore, it does not appear in the table below because his EBITDA and Yield Cap approaches already include those deductions.

[2] As will be noted, these approaches not listed in this table may be helpful in some situations even though they receive no weight. These approaches are not listed here for ease in understanding the issues in this case.

Valuation Methodology	**Dr. Heaton** (UPRR)	**Mr. Hales** (The Commission)	**Mr. Eyre** (The Counties)
Income: Yield Capitalization	--	--	[redacted] (98%)
Income: DCF	[redacted]	[redacted]	--
Market: Stock and Debt (10-K)	--	--	[redacted] (1%)
Market: EBITDA Multiplier	--	--	[redacted] (1%)
Correlated System Value	[redacted]	[redacted]	[redacted]
LESS Computer Software	[redacted]	[redacted]	--
LESS Assembled Workforce	[redacted]	--	--
Adjusted System Value	[redacted]	[redacted]	[redacted]
TIMES Utah Allocation Factor	[redacted]	[redacted]	[redacted]
Utah Market Value	**$881,000,000**	**$1,683,918,000**	**$2,408,220,000**
LESS Locally Assessed Vehicles	($2,835,859)	($5,406,268)	($7,532,867)
Utah Assessment	**$878,164,141**	**$1,678,511,732**	**$2,400,687,133**
LESS 4-R Act Deduction (7.48%)	($65,686,678)	($125,552,678)	($179,571,398)
Utah Taxable Value	**$812,477,643**	**$1,552,959,055**	**$2,221,115,735**

The merits of the valuation methodologies, deductions, and adjustments made in these appraisals are discussed below. Specifically, the court will address: (1) the cost approach to value; (2) the market approach to value, including stock and debt approaches; and (3) the income approach to value before (4) discussing the proper deductions for intangible property.

1. Cost Approach

The cost approach is a valuation method that estimates the fair market value by determining the price that a buyer would pay to build an equivalent property. This approach is based upon the idea that a buyer would not pay more for the subject property than it would cost for the buyer to recreate the same property. All of the valuation experts agreed to some extent that the cost approach is not an accurate measure of UPRR's value. In fact, Rule 62 specifically states that, for railroads, the "cost indicator should generally be given little or no weight because

there is no observable relationship between cost and fair market value." Utah Admin. Code R884-62(6)(b)(i).

This does not mean, however, that the cost approach is meaningless or entirely unhelpful. Indeed, Messrs. Hale and Eyre both evaluated UPRR using the cost approach because they find that it provides a "sanity check" and another data point in making an overall valuation determination. Dr. Heaton failed to make such a calculation. The court finds that the cost approach, while not a reliable indicator of fair market value in this instance, helps guide an appraiser in reaching his or her ultimate valuation determination.

2. Market Approach: Stock & Debt

The market approach to value is a valuation method whereby fair market value is determined by looking at the selling price of similar assets. Since there are no comparable sales of large operating railroads, there was no pure market valuation in this case. Messrs. Hales and Eyre prepared a type of market approach using what is called the stock and debt model. In this stock and debt approach, the sales prices associated with the shares of UPRR's parent company Union Pacific Corporation ("UPC") are added to the estimated value of UPC's debt. The resulting value is then multiplied by a factor to arrive at a portion deemed applicable to UPRR. The resulting figure is used as the system value for UPRR.

The court is persuaded by UPRR that the stock and debt approach did not arrive at fair market value in this instance.[3] Specifically, the testimony showed that this is not an accurate measure because: (1) stock prices are affected by things beyond the tangible, taxable property owned on the lien date (i.e., the value of intangible property and future property and projects);

[3] The court only addresses Mr. Eyre's approach since Mr. Hales did not place any weight upon his stock and debt approach.

and (2) the motivations of a purchaser of a small number of shares are different than the motivation for a hypothetical purchaser of all of UPRR's taxable, tangible property. Since the stock prices capture things beyond property that is taxable under Utah law, to be a reliable indicator of value, one would need to be able to remove the value of the intangible property from the stock and debt approach values. Accordingly, the court is persuaded that Mr. Eyre's weighting on his stock and debt approach was improper for two reasons. First, Mr. Eyre did not make any deduction for intangible properties or other non-taxable value captured in the stock prices. (*See* Ex. C-15). Without these deductions, the stock and debt figure captures value not taxable under Utah law. Second, the Counties did not persuade the court that these types of adjustments are unnecessary because the stock and debt approach does not capture the value of intangible property. Thus, the court finds that the stock and debt system value used by Mr. Eyre should not have received any weight.

In addition to the stock and debt approach, Mr. Eyre prepared his EBITDA Multiple approach. This EBITDA approach is done by taking the stock and debt value for the guideline companies in the industry and multiplying it by an EBITDA Multiple.[4] The court will not delve into the specifics of this approach because it finds that this is essentially a different type of stock and debt approach. Specifically, in Mr. Eyre's' EBITDA approach, the numerator contains the stock and debt value for UPRR and guideline companies and, therefore, the resulting EBITDA system value necessarily suffers from the same problems the court noted with the stock and debt

[4] The EBITDA multiple is derived by taking the enterprise value (the fair market value of debt plus the fair market value of equity minus cash) and dividing it by the EBITDA.

approaches. Thus, the court finds that this is not a reliable indicator of value in this instance[5] and, for the reasons listed above, should not have received any weight.

For the foregoing reasons, the court concludes that Mr. Eyre's placing a combined 2% reliance on these indicators of value was not supported by the preponderance of evidence. The court will, therefore, disregard these indicators of value.

3. Income Approach

Now that the court has concluded that the cost and market approaches should not have received any weight, the only remaining system values come from the income approach. The income approach was acknowledged by all of the appraisers as the most appropriate approach to use in valuing UPRR in this case. Each of the valuation witnesses used variations of the perpetual discounted cash flow model ("DCF") or the yield capitalization model ("Yield Cap"). Dr. Heaton and Mr. Hales both used the DCF model that included ten years of discrete net cash flows and a terminal value. Mr. Eyre, on the other hand, used a different single-year estimate of cash flow in a constant growth Yield Cap model. Despite being different, these models essentially require the same inputs. Namely, each expert needed to determine (a) cash flows and (b) the discount rate before they could (c) make their ultimate valuation determinations using their income models.

a. Cash Flow Projections

Each of the experts developed net cash flow estimates to plug into their income models. Before turning to the disputes about cash flow estimates, the court finds it helpful to summarize each of the experts' methods and cash flows.

[5] The court does not intend this holding to mean that this could never reach fair market value for the tangible, taxable property. This holding is simply to mean that Mr. Eyre and the Counties failed to demonstrate that Mr. Eyre was able to remove the value of intangible property.

Cash Flow Estimates
(Dollars in Thousand)

Year	Dr. Heaton	Mr. Hales	Mr. Eyre
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			

Mr. Hales and Dr. Heaton used similar methods to estimate UPRR's 2018 cash flow. In very simple terms, Dr. Heaton and Mr. Hales calculated UPRR's cash flows by beginning with the five-year historical average of gross revenues and operating expenses (i.e., salaries, wages, materials, rolling stock, depreciation, etc.). The averages can then produce a net cash flow by deducting the operating costs, taxes, capital expenditures, etc. from the gross cash flow average. Since Dr. Heaton and Mr. Hales used the DCF model, they could select different rates of growth for the first ten years of projected cash flows until calculating the terminal value. It is this flexibility for selecting growth rates that produces the majority of the differences in Dr. Heaton and Mr. Hales' flow projections. Specifically, there are two differences in the growth rate estimates between Dr. Heaton and Mr. Hales.

First, these experts selected different growth rates. Dr. Heaton selected an inflation rate of 2.0%, which comes from the Cleveland Federal Reserve. Mr. Hales, on the other hand, selected an inflation rate of 1.9%, which he calculated by averaging a few indicators of inflation (e.g., Value Line's GDP price deflator, a 10-year historical average change deflator, and the

comparison of inflation-protected bonds vs. 20-year treasury bonds). The court is persuaded that either growth rate is supportable by the evidence presented at trial.

Second, Dr. Heaton and Mr. Hales applied their respective growth rates differently. Dr. Heaton opted to grow revenue at a slower rate than he grew operating expenses. Specifically, Dr. Heaton grew his revenue at .5% from 2018–2022, 1.5% from 2023–2027, and then 2% in his terminal value. All of Dr. Heaton's operating costs, however, grew at 2% for each year, including in the terminal value. Dr. Heaton argues that revenue must grow slower than operating expenses to account for the economic pass-through resulting from the Tax Cuts and Jobs Act of 2017, Pub L. No. 115-97, 131 Stat. 2054 ("TCJA").

The TCJA lowered UPRR's tax burden significantly, resulting in nearly $1 billion in added cash flows. Dr. Heaton argued that these billion dollars would be passed through to UPRR's customers in the form of lower rates and, therefore, UPRR's revenues would grow slower than its costs over the next ten years. In contrast, Mr. Hales did not account for any economic pass-through. Thus, Mr. Hales grew UPRR's revenues and operating expenses (except depreciation) at the same growth rate of 1.9% over the ten years and into the terminal value.

It is worth noting that there are other, minor differences in Dr. Heaton and Mr. Hales' cash flow projections. For example, these experts differ: in accounting for bonus depreciation implemented under the TCJA; in their treatment of UPRR's leased rolling stock; and Dr. Heaton's revenues are the revenue net of fuel charges. Of these differences, only the treatment of leased rolling stock will be of any significance in this case. The court will discuss that topic in more detail below. Overall, however, Dr. Heaton and Mr. Hales' cash flow projections—except for pass-through and the treatment of leased property—are substantially similar. Thus, the court's cash flow section will turn on the outcome of those two issues.

Mr. Eyre calculated his cash flows differently by relying only upon UPRR's 2017 cash flows to derive his projected 2018 cash flows. According to Mr. Eyre, only looking at UPRR's 2017 cash flows was the best way to project future cash flows because "there was really not a discernible trend" when he looked at the "operating income over [the last] five years." (Tr. at 1045). Thus, Mr. Eyre took UPRR's net revenue from 2017, made adjustments for income and expenses from rental properties, depreciation, and capital expenditures. Once Mr. Eyre had his 2017 net operating income, he grew that number by his selected inflation rate of 2.3% to arrive at his predicted 2018 net operating income. Mr. Eyre then made adjustments by adding back depreciation (2017 increased by the same 2.3%) and deducting capital expenditures and working capital to arrive at his final 2017 cash flow estimate of $[redacted]. Since Mr. Eyre is using the Yield Cap—a constant growth model—his cash flows beyond 2018 are simply the 2018 cash flow estimate grown by 2.3%.

The court is not persuaded that Mr. Eyre's cash flow predictions are reliable for two reasons. First, Mr. Eyre's cash flow predictions do not properly account for the accelerated or bonus depreciation under the TCJA. This is, admittedly, a relatively insignificant issue. Second, Mr. Eyre's unreasonably opted to rely upon only one year of historical data to project future cash flows. This is the same reason his cash flow estimates were rejected in a previous case where Mr. Eyre used two years of historical data to project cash flows. The court reasoned:

> In using only a two-year average to project future [net operating income], Mr. Eyre decreased his sample size of historical data, and thereby reduced the reliability of the trend analysis and his projection. The margin of variability or error in a trend projected using two data points is intuitively greater than where multiple data points are used.

Union Pacific R.R., v. Utah State Tax Comm'n., Case No. 090700830, at 32 (May 1, 2003) [hereinafter *Judge Morris Decision*]. This same reasoning applies here. In fact, Mr. Eyre's cash

flow estimate is less reliable in this instance because he opted to only use one year of historical data. Thus, for the foregoing reasons, the court rejects Mr. Eyre's cash flow estimates.

Now that the court has concluded that Mr. Eyre's cash flows are unreliable, the court must decide between Dr. Heaton and Mr. Hales' cash flow estimates. As noted above, these experts' cash flow projections are quite similar except for two issues. Thus, the court will focus its inquiry on (i) what impact—if any—the TCJA would have on UPRR's cash flows and (ii) what adjustments should the court make for UPRR's operating leased properties. Once these issues are resolved, the court can (iii) make a final determination about the proper total cash flows.

i. TCJA & Pass-Through

In December 2017, the TCJA was enacted, reducing the federal corporate tax rate from 35% to 21%. The TCJA also allowed corporations to offset taxes by claiming accelerated "bonus" depreciation for certain newly acquired assets. All the valuation experts agreed that the TCJA would immediately reduce UPRR's tax liabilities and, therefore, increase UPRR's cash flow by about $1 billion in 2018. The experts, however, disagreed on whether the economic principle of pass-through would reduce UPRR's cash flows in the subsequent years.

Dr. Heaton testified that UPRR operates in a competitive industry and that the principles of supply and demand will require that UPRR pass the benefits of the TCJA through to its consumers in the form of lower transportation prices. By Dr. Heaton's calculations, UPRR's cash flow margin was approximately 17% before the enactment of the TCJA. After the enactment of the TCJA, this cash flow margin would increase to 24.63%. The parties do not dispute these margins. Under UPRR's theory, however, market forces would gradually push this cash flow margin back down from 24.63% to slightly above its pre-TCJA margin of 17%. To achieve this

pass-through, Dr. Heaton assumed that UPRR's revenue will grow at a slower pace than its costs for 10 years and then the costs and revenues will both grow at 2% into perpetuity.

To support his pass-through theory, Dr. Heaton pointed to the Staggers Act of 1981. In essence, the Staggers Act was a large-scale deregulation of the United States railroad companies. *See generally* Pub. L. No. 96–448, 94 Stat. 1895 (Oct. 4, 1980) (discussing the purpose of and specific laws of the Staggers Act). Dr. Heaton contends that after the enactment of the Staggers Act, railroad transportation prices and revenue decreased for many years. Thus, this was posited as evidence that the railroad was competitive and the TCJA would result in UPRR passing through its increased cash flows to its customers.

UPRR also called economist Dr. Michael Williams to support its pass-through theory. According to Dr. Williams, the principle of pass-through is a basic economic theory is supported by a lot of research. Specifically, Dr. Williams stated "that firms in competitive markets are forced by competition to pass through" decreases in costs. By extension, Dr. Williams stated that the TCJA's impact on UPRR's cash flows was a pass-through event because UPRR operated in a highly competitive market. To support his arguments, Dr. Williams relied upon the Staggers Act and the 1986 Tax Reform Act (implemented in 1987) enacted under President Regan. The 1987 tax cut is similar to the TCJA in that it was a large reduction in the federal corporate tax rate.

The Counties and Commission strongly oppose UPRR's theory of pass-through. Neither Messrs. Hales nor Eyre accounted for *any* economic pass-through in their cash flows. Additionally, the Counties or Commission did not call a rebuttal expert, relying instead on Messrs. Hales and Eyre's opinions and cross-examination of UPRR's experts.

The Counties and Commission made three arguments against UPRR's theory: (1) the Staggers Act is not akin to the TCJA because the Staggers Act impacted only the railroad

industry and deregulation is different than a corporate tax cut; (2) UPRR's theory fails to consider that UPRR is also a consumer of goods and services and—under its own theory—its operating costs should decrease thereby holding UPRR's revenues stable; and (3) UPRR's theory fails to consider the possibility that increasing volume would negate any decrease in rates charged to customers—again, holding revenues stable. The court will address each of these criticisms in turn before it (4) turns to Dr. Williams' testimony and evidence on this issue.

First, the court is persuaded that the Staggers Act is not good evidence of how a corporate tax reduction will influence UPRR's cash flows. The Staggers Act—essentially a wholesale deregulation of a single industry—will have a different, and likely larger, impact on a railroad's revenues, pricing, and volume. This conclusion is readily seen in the data provided by UPRR, as will be shown below. (*See* P-25, Staggers.) Additionally, the TCJA, as opposed to the Staggers Act, presumably resulted in increased cash flows to all corporate industries. This should have some beneficial impact on UPRR in the way of lower operating costs. Thus, without more of a showing, the court is unconvinced that the Staggers Act alone is sufficient proof to show that the TCJA will result in UPRR passing through 100% of the increased cash flows.

Second, even assuming that the Staggers Act is analogous to the TCJA, the court finds that UPRR's pass-through theory fails to account for the fact that UPRR is a consumer of goods and that UPRR may also benefit from the tax cuts by lowering its operating costs. The data from P-25 supports this conclusion. The P-25 Exhibit shows the revenues, operating expenses, volume, and pricing for the railroad industry from 1964 to 2017. These numbers have been adjusted to reflect the value of the dollar in 2017. Focusing on the periods following the Staggers Act and 1987 tax cuts, the court notices a few flaws in UPRR's pass-through theory as it pertains to operating costs. Specifically, the court focuses its attention on revenues and operating

expenses. The operating expenses are listed in Column J on Exhibit P-25. These numbers show that the Staggers Act and 1987 tax cuts decreased operating costs. For example, in 1980, the operating expense is listed at $67.2 billion. By 1986, the Staggers Act decreased operating expenses by $22.5 billion while volume decreased by 51 billion ton-miles. The decrease in volume alone may explain the decrease in operating expenses. In the 10 years following the 1987 tax cuts, however, the operating costs decreased another $5.2 billion despite *increasing* shipping volume by 412 billion ton-miles. Thus, the railroads saw a substantial decrease in operating costs despite the increased volume following the 1987 tax cuts. Accordingly, the evidence contradicts UPRR's assumption that a railroad's operating costs would not decrease. This undermines UPRR's 100% pass-through theory.

Third, the court agrees with Defendants that Dr. Heaton's theory and reliance upon the post-Staggers act data fails to fully consider that declining prices charged to consumers may lead to an increase in volume, negating—or at least mitigating—any potential losses due to decreased prices. Again, UPRR's assumptions are not supported by the data in Exhibit P-25. This data shows that from 1981 to 1986, volume decreased by 5%, revenue decreased by 42%, and cost (the rate charged per ton-mile) decreased by 31%. In the 10 years following the tax cuts, however, volume increased by 36%, while revenue declined by only 5% despite a 63% cost decline. The data from the 10 years after the tax cuts demonstrates that the 36% volume increase had a substantial impact by slowing the declining revenue despite a large decrease in the prices charged per ton-mile. In fact, in terms of percentages, revenue after the tax cuts fell much slower than the cost charged per ton-mile.[6] Additionally, the "Productivity" trend line on the graph

[6] Specifically, revenues fell, on average, by 0.51% each year from 1987–97 while cost declined by an average of 4.52% during that same period.

shows that railroads became much more efficient in transporting goods. Thus, not only did railroads increase volume but they also increased the margins made on each ton-mile. Thus, the data shows UPRR erred in failing to consider the impact that decreased cost had on the railroads' volume and revenues.

Fourth, the court is similarly not persuaded by Dr. Williams' testimony about pass-through for two reasons. First, none of Dr. Williams' examples were based on pass-through incidents that affected all industries like the TCJA. All of Dr. Williams' examples were industry-specific (e.g., oil and gas, foodstuffs, alcohol, tobacco, etc.). There was no evidence that industry-specific pass-through incidents would have the same influence on cash flows as a pass-through incident that impacts all industries. Second, Dr. Williams' evidence shows that 100% pass-through is rare. Of Dr. Williams' 26 examples of pass-through incidents: only four instances appear to show a 100% or greater pass-through (two instances of oil & gas cost increases, retail goods subsidy, and a retail gasoline/diesel tax); six examples have a mixed result (pass-through occurring at levels above and below 100%); and 16 examples show less than 100% pass-through (nine with less than 50% pass-through). Thus, the evidence appears to show that 100% pass-through is the exception, not the rule. Additionally, the percentage and speed of pass-through seems largely dependent on the country and industry. UPRR did not present any evidence to show why it would fall into the category of industries that experienced 100% pass-through. Without a stronger showing that UPRR is more likely to fit into the exception, the court is unwilling to find that a 100% pass-through is proper in this instance.

The court has now concluded that UPRR's 100% pass-through theory is not supported by the preponderance of evidence and must be rejected. The court is, however, somewhat skeptical

that there would be zero pass-through following the TCJA—as Messrs. Hales and Eyre assume. Judge Jenkins aptly described this dilemma during his bout with the 1988 version of this case:

> One problem with subjecting complex issues like valuation to judicial determination is that the courts generally must choose among the competing claims of experts. Unless the court performs its own appraisal—a task it is not inclined to undertake—the court must hold either for the plaintiff or the defendant, when the truth—or at least a more exact picture of reality—lies somewhere in between. The court, of course, may adjust an expert's appraisal up or down based on other expert's critiques of the appraisal, but the starting point for judicial determination is always one appraisal or another, and each appraisal is based on a particular methodology that, to a large extent, predetermines the result.

Union Pacific R. Co. v. State Tax Comm'n of Utah, 716 F. Supp. 534, 551–52 (D. Utah 1988) (footnotes omitted).

In this instance, the court is most certainly not inclined to make its own cash flow estimates. The court is similarly not in a place to adjust the experts' existing pass-through assumptions to a level between 0% and 100%. Indeed, it would seem arbitrary for the court to, without any foundation or evidence, say, for example, that 35%—or some other percentage—pass-through is the correct rate. Thus, given the choices, the court finds that the preponderance of the evidence supports the Commission and Counties' 0% pass-through as the better of the two options. This conclusion is not only supported by the reasoning listed above but is also supported by analysts' projections. The analyst's projections did not show an expected reduction in cash flows following the TCJA. While these projections capture value from intangible property, they nevertheless persuade the court that experts beyond those who testified during the trial were not expecting UPRR to pass through 100% of the benefits resulting from the decreased tax rate.

Thus, for the foregoing reasons, the court finds that UPRR's 100% pass-through assumption is unreliable. The court will, therefore, rely upon Mr. Hales' cash flow predictions. These conclusions do not mean, however, that all the individual components of Dr. Heaton's

projections were unreliable. To the extent that individual portions of these experts' projections are more persuasive, the court may choose to rely upon those figures.

ii. Valuing Operating Leased Properties

The second, less significant cash flow dispute revolves around how to correctly treat UPRR's operating leased properties. UPRR asserts that these properties must be treated as though UPRR owned the rolling stock. Thus, according to UPRR, the Commission should account for all aspects that would be associated with ownership as it pertains to cash flows, like taxes, depreciation, and capital expenditures. In making these calculations, Dr. Heaton takes his net cash flow, adds back the lease payments, makes tax adjustments to capture the differences in ownership as compared to leasing, makes depreciation adjustments, and then deducts capital expenditures that UPRR would need to spend if they actually owned the rolling stock (e.g., maintenance and replacement costs). Dr. Heaton's leased rolling stock capital expenditure costs grew by 2% each year—just like his other expense categories.

The Counties and Commission, on the other hand, argue that UPRR's assertion that leased property should be treated as owned is an oversimplification—or, more precisely, overly-literal—and that leased property should be taxed to account for the entire ownership interest in the property, which includes the "leasehold interest and the leased fee interest in any of the operating leased property." (Tr. at 866 (Hales).) Thus, the Counties and Commission do not treat the leased operating property as though UPRR owned it, rather they attempt to capture the value that the rolling stock is to the lessor. To capture this value, the Commission averaged five years of the lease payments less depreciation, made adjustments to the five-year average to account for income tax, and then multiplied that figure by the discount rate. Inherent in this calculation, is the Commission's assumption that the depreciation costs and profit from the rental payments

capture the lessor's costs to replace its rolling stock. Additionally, the Commission assumes that UPRR would replace current leases with new leases, not that UPRR would replace its current leases with new rolling stock.

The dispute over the value of the operating leases is twofold. First, the parties disagree on the appropriate level of capital expenditures. Second, and relatedly, the parties disagree on whether those capital expenditures should account for replacing leased rolling stock with new rolling stock or replacing the old stock with a new lease.

The court finds the *Judge Morris Decision* to be instructive on these matters. In his opinion, Judge Morris sets forth a four-part process for determining the value that operating leases[7] add to a company for valuation purposes:

> The generally accepted method of capturing the value associated with the leased operating property in income indicator approach valuations is to treat the property if owned by (1) disallowing the rent expense originally taken for the leased property, (2) allowing a depreciation expense, (3) recalculating the tax obligation to account for prior adjustments, and (4) making an appropriate allowance for the capital expenditures that would be required to maintain and replace the property.

Judge Morris Decision, at 39. Dr. Heaton concedes that his method of calculating the value of UPRR's operating leases is different from the method approved of in the *Judge Morris Decision* and different from the method UPRR uses when submitting documents to the Utah State Tax Commission. Additionally, the court finds that Dr. Heaton has simply calculated the difference between UPRR's cost of leasing versus ownership. Figuring the cost of ownership is much different than "capturing the *value* associated with leased operating property." *Id.* at 39 (emphasis added). Thus, the court finds that Dr. Heaton's calculation did not follow the well-

[7] Judge Morris also draws a distinction between operating leases and capital leases. The leased property here are operating leases which are not, for accounting purposes, "treated as owned, and are not capitalized or depreciated, and their rents are expensed." *Judge Morris Decision*, at 38–39.

reasoned process outlined in the *Judge Morris decision*. *See id.* at 39--42 (noting that the method in the order was widely supported by credible sources.) Accordingly, the court finds that Mr. Hales and Eyre's calculations are supported by the preponderance of evidence.

iii. Cash Flow Conclusion

For the foregoing reasons, the court concludes Mr. Hales' cash flows are the most reliable. Thus, the court finds the net cash flows are as follows:

Mr. Hales' Cash Flow Estimate
(in thousands)

Year	Net Cash Flow
2017	[redacted]
2018	
2019	
2020	
2021	
2022	
2023	
2024	
2025	
2026	
2027	

These cash flows will be used in the final calculation after the court has determined the appropriate discount rate.

b. Discount Rate or WAAC

The discount rate is the return that an investor would expect to receive commensurate with the riskiness of the investment. This rate is also referred to as the weighted average cost of capital ("WAAC"). Investors typically finance the purchase of assets by raising money through a combination of borrowing money (debt) and issuing stock (equity). The WAAC is the combined rate that investors expect for committing their capital to buy the subject assets. The formula for the WAAC is: WAAC = (% of debt financing * the after-tax cost of the debt rate) + (the % of

equity financing * the cost of equity rate). In this instance, for the court to determine the correct WAAC, it must first determine UPRR's: (i) capital structure; (ii) cost of debt; and (iii) cost of equity.

i. Capital Structure

The capital structure is the typical percentage of debt and equity financing that a company uses to acquire a property. To determine the capital structure, a valuation expert looks at the capital structure of comparable companies. In this case, all of the valuation experts looked at the same core[8] of railroads: CSX Corp., Canadian National, Canadian Pacific, Norfolk Southern, and Union Pacific. Both the Counties and the Commission considered all five of these railroads to be comparable companies for their valuations. Dr. Heaton, on the other hand, chose to exclude Canadian National and Canadian Pacific because "[t]he Canadian railroads are under a different regulatory structure." (Tr. 346.) That is to say, these Canadian railroads have a majority of their operations outside the United States and are under different tax obligations than UPRR. The court finds this reasoning persuasive. Accordingly, the court will only use CSX Corp, Union Pacific, and Norfolk Southern railroads as guideline companies.

None of the parties in this instance made a good argument about why their capital structures were the most reliable. Even when the Canadian railroads are removed from Messrs. Eyre and Hales' capital structure numbers, the three expert's values are different. For example, each of the experts showed that CSX Corp.'s capital structure is 21.64% debt (Eyre), 19.4% debt (Heaton), and 21.26% debt (Hales). A similar difference exists for each expert's capital structure for UPRR and Norfolk Southern. Additionally, when the court removes the Canadian railroads

[8] Dr. Heaton looked at companies beyond these five railroads (e.g., Genesse & Wyoming and Kansas City Southern). None of the experts, however, placed any weight on companies other than the five listed in the body of this Order.

from Mr. Eyre and Mr. Hales' capital structure analyses, the average is 19.5% debt (Hales) and 20.21% debt (Eyre) as compared to Dr. Heaton's 17.5% debt.

Although this is not a major point of contention, this value influences the discount rate for determining the overall valuation of UPRR. Even small changes in the discount rate can make large differences in the ultimate valuation determination. The court, therefore, feels compelled to make a finding on this issue. Accordingly, the court finds that Dr. Heaton's capital structure is the most accurate. Dr. Heaton was the only valuation expert who sufficiently justified his criteria for accepting guideline companies. Thus, the correct capital structure for UPRR in 2018 was 17.5% debt and 82.5% equity.

ii. Cost of Debt

The cost of debt is the market rate a bondholder would receive for purchasing a bond with commensurate risk. The appropriate cost of debt is derived by looking at the cost of debt associated with the typical debt rating for the relevant railroad industry. As noted above, Dr. Heaton's selection of comparable companies was the most persuasive.[9] Thus, the typical debt rating for the railroad industry on the subject lien date was "Baa1." The cost of debt with this rating was between 4.22% and 4.31%. The court will again use Dr. Heaton's selection of 4.31% since this rating does not include the Canadian railroads.

Additionally, the valuation experts all accounted for the tax deductibility of the interest on debt. Thus, each expert adjusted their cost of debt by multiplying the value by the

[9] The court does not intend this ruling to mean that the Canadian railroads are not appropriate guideline companies moving forward. It may be the case that these Canadian railroads produce a better estimate of fair market value. In this instance, however, neither the Counties or the Commission put forth any reasoning or evidence to justify their inclusion.

complement of the tax rate (i.e., 1 minus the tax rate). Consequently, the court finds that Dr. Heaton's 3.23% value is the correct adjusted value of the cost of debt for UPRR in 2018.

iii. Cost of Equity

The cost of equity is likely the most significant issue before the court. The two methods for determining the cost of equity in this case were the Capital Asset Pricing Model ("CAPM") and the Dividend Growth Model ("DGM"). Both of these models are widely-accepted and used frequently in the valuation field. The dispute in this case revolves around the inputs into these formulas, the appropriate weighting that should be given to the respective models, and whether the court should apply a liquidity premium to the cost of equity. Specifically, UPRR asserted that the Commission's cost of equity was too low because the Commission (1) placed 100% reliance on the CAPM, (2) used an improper version of the DGM, and (3) failed to make a liquidity adjustment. The court will address each concern below.

1. CAPM Models

The cost of equity equation preferred by Rule 62 is the CAPM. Much testimony was given regarding this model. The court finds that the bulk of the disagreement between the parties on this issue was unnecessary because Rule 62 fixes most of the data that will be used in this formula. The CAPM formula has three inputs; the risk-free rate, the risk premium, and beta.[10] Rule 62 fixes both the risk-free rate and the risk premium. Under Rule 62, most of the preferred methods for valuation are "rebuttable presumptions." Utah Admin. Code R884-24P-62 (4)(b)(iii). But, under Rule 62, if the language is mandatory then the Commission is required to

[10] Beta is generally defined as the measure of a stock's volatility in relation to the overall market. Under Rule 62 this value is not fixed. Rather, the rule states that "beta should reflect an average or value-weighted average of comparable companies and should be drawn consistently from Value Line or an equivalent source. The beta of the specific assessed property should also be considered." UTAH ADMIN. CODE R884-24P-62 (5)(b)(Dd).

set the values accordingly. *Id.* Relevant here are three fixed methodologies or inputs. *See id.* at R884-24P-62 (5)(b)(ii)(A) (noting that the DCF model should use the same assumptions as the preferred yield cap).

First, Rule 62 requires that the CAPM model be given at least 50% weight. *Id.* at R884-24P-62(5)(b)(Aa). Second, Rule 62 states that "[t]he risk free rate ***shall be*** the current market rate on the 20 year Treasury bonds." *Id.* at R884-24P-62(5)(b)(Cc) (emphasis added). Third, Rule 62 mandates that the "risk premium ***shall be*** the arithmetic average of the spread between the return on stocks and the income return on the long-term bonds ***for the entire historical period*** contained in the ***Ibbotson Yearbook*** published immediately following the lien date." *Id.* at R884-24P-62(5)(b)(Ee) (emphasis added).

With these fixed variables and the requirement that the CAPM receive 50% weight, the court can—and must—disregard some portion of each expert's methodologies or conclusions. Without delving into the individual places where the valuation experts failed to follow Rule 62, the court makes the following findings. First, the CAPM should have received at least 50% weight in each of the expert's valuations. Second, the risk-free rate should have been 2.58%, which was the rate on a 20-year treasury bond in 2018. Third, the risk premium—or earned risk premium ("ERP")—should have been 7.07%. These values were fixed by Rule 62 and are not rebuttable presumptions. The court is therefore compelled to use these inputs. Thus, the only difference between the experts should have been with the beta and weighting of other models.

Here, the different valuation experts used a beta of 1.13 (Eyre), 1.11 (Hales), and 1.15 (Heaton). The difference in these beta numbers results from the selection of comparable companies and because Mr. Hales selected the stock value of Union Pacific Corporation, not

UPRR. As noted above, the court finds that Dr. Heaton's selection of guideline companies is the most persuasive. Accordingly, the court will use Dr. Heaton's beta of 1.15.

When these inputs are used, the CAPM cost of equity is 10.71. The formula for this equation is outlined in Rule 62: "k(e) = R(f) + (Beta * Risk Premium), where k(e) is the cost of equity, and R(f) is the risk free rate." *Id.* at R884-24P-62 (5)(b)(Aa). Thus, in this instance, the cost of equity formula is: 2.58 + (1.15 * 7.07) = 10.71. As noted above, the main dispute around the CAPM model was the weight afforded to this value. The court will address that issue in Section (III)(C)(3)(iii)(4) below.

2. DGM Models

There are two types of DGM models in dispute here; the single-stage DGM used by Dr. Heaton and the multi-stage DGM used by Messrs. Hale and Eyre. Both models are—to some extent—generally accepted. The single-stage DGM model is calculated by taking the projected next year's dividend divided by the current price of stock (called the yield) and then adding the projected growth. The parties do not dispute that the correct formula is: $k(e) = (D_1 / P_0) + g$. In this formula, K(e) is the cost of equity, D_1 is the projected dividend, P_0 is the current stock price, and g is the projected growth. The multi-stage DGM uses the same yield inputs but differs in that it uses multiple stages or periods of growth. The justification for the multi-stage model is that it allows an appraiser to gradually reduce high growth periods or estimates to a more sustainable, long-term growth. Dr. Heaton is the only expert that relied upon the single-stage DGM, placing 80% of the weight on his DGM's estimate of UPRR's cost of equity. Mr. Hales conducted three multi-stage DGM's and placed no weight on any of the resulting costs of equity. Mr. Eyre, on the other hand, conducted one multi-stage DGM and placed 25% weight on the resulting cost of equity.

Single-Stage DGM

The bulk of the dispute revolves around Dr. Heaton's growth estimates in his single-stage DGM. For his single-stage DGM, Dr. Heaton used Value Line and Bloomberg's three to five-year estimates of growth for UPRR, CSX Corp., and Norfolk Southern railroads. When these estimates of growth are added to the yield,[11] Dr. Heaton's cost of equity is 13.6%.[12] The Commission and Counties argue that these short-term estimates of growth are problematic because such high growth numbers—in relation to the growth of the overall economy—are not realistic long-term, sustainable growth predictions. It is worth noting that all the experts agreed that the growth used in a DGM to derive the cost of equity for a DCF model should be sustainable growth estimates. The issue then becomes whether Dr. Heaton's nearly 12% growth estimates are sustainable and properly used in his DGM in this instance.

The court finds that UPRR has not proved by a preponderance of evidence that an 11.89% growth rate is an appropriate, sustainable growth rate to use in a single-stage, perpetuity DGM. First, the court is persuaded by Dr. Bernardo's[13] testimony that the growth estimate used in a single-stage DGM is "supposed to be very long-term growth" that "assumes that cash flows . . . will grow at a constant rate in perpetuity." (Tr. 1098.) In this instance, Dr. Heaton's 11.89% growth is nearly three times his predicted growth rate for the entire economy. The court is

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[11] Yield simply refers to the (D_1/P_0) portion of the DGM formula. The yield is also known as the dividend yield and is just the expected dividend at the end of the year divided by the current price of a share of the stock. Southern

[12] Specifically, Dr. Heaton's formula is 13.64% = 1.76% + 11.89%. Dr. Heaton's yield (1.76%) was derived by taking UPRR, CSX Corp., and Norfolk Southern's stock price on 12/31/2017 and dividing it by Valuline's 2018 predicted dividend payout. The growth for each of these railroads is simply an average of Valueline and Bloomberg's predicted three to five-year growth estimates. The yield and growth were then added together for each company. Once Dr. Heaton had each of these company's estimated returns (yield plus growth), he averaged those returns to come up with his 13.64% cost of equity.

[13] Dr. Bernardo was the Counties' expert on this issue.

persuaded that such a relatively high growth rate, when compared to the overall economy, is not a reliable estimate of long-term, sustainable growth.

UPRR attempted to rebut this conclusion by demonstrating that as growth slows, dividends would increase, thereby holding stable the growth rate produced by the DGM even during periods of slower earnings. Again, the court finds Dr. Bernardo's testimony persuasive on this point. Dr. Bernardo testified that UPRR's contention is technically correct but is not sustainable in perpetuity and ignores the cost of the stock price and its influence on the yield. Specifically, Dr. Bernardo stated that a company could choose to use its increased cash flows resulting from slowed growth[14] to pay larger dividends. But, according to Dr. Bernardo, to only focus on the dividends ignores that yield includes more than just dividend payouts and the stock price could decrease or increase the yield. Additionally, Dr. Bernardo testified that while "it is absolutely true . . . [that] companies have grown their dividends at a faster rate than their earnings," "simple math tells you that can only go on so long because then you run out of earnings to pay out." (Tr. 1196.) The court finds this persuasively rebuts UPRR's contention that such growth rates are sustainable into perpetuity because as growth slows dividends would increase and hold the growth rate stable.

Second, the court finds that Dr. Heaton's 11.89% growth rate used in his DGM is incompatible with his conclusion that UPRR's net cash flows will decline over the next 10 years. This strikes the court as a substantial mismatch in theories. Specifically, Dr. Heaton assumes that UPRR's net cash flows will decrease because it will be forced to pass the tax cut benefits on to

[14] Increased cash flows from slowed growth would be the result of the company not using cash to build its business. That is to say, cash flows would increase because the company is not incurring more expenses on investment opportunities, so expenses decrease and, therefore, cash flows increase. Thus, for a period, dividends can grow faster than earnings.

customers because of market pressures. In contrast and as discussed above, Dr. Heaton attempts to justify his high growth rate by stating that dividends will increase as growth slows, justifying the high growth rate used in his DGM. These theories are incompatible because UPRR cannot have declining revenues due to pass through while simultaneously paying higher dividends.

For the foregoing reasons, the court does not find that Dr. Heaton's single-stage DGM appropriately estimates the cost of equity in this instance.

Multi-Stage DGM

UPRR criticizes Messrs. Hales and Eyre's use of the multi-stage DGM for three reasons: (1) the periods selected to reduce growth are arbitrary; (2) the DGM fails to include a terminal value; and (3) these errors result in a downward bias, making the CAPM cost of equity estimate seem generous. The court will address each of these arguments in turn.

First, the court is not so concerned with the alleged "arbitrary" growth periods in the multi-stage DGMs used here. While the periods *could* be arbitrary, Messrs. Hale and Eyre justified each of their selected periods with adequate reasoning. Valuations are full of judgment calls that have the potential to be painted as "arbitrary." Indeed, all the valuation experts—including UPRR's experts—frequently made judgment calls in conducting their valuations. A valuation expert's judgment calls are not arbitrary when supported in the literature or by sound reasoning, or both. Thus, the court rejects UPRR's assertion that a multi-stage DGM is *per se* arbitrary.

Similarly, UPRR complains that the multi-stage DGM used by the Counties and Commission are not recognized models for estimating the cost of equity. UPRR frequently tried to demonstrate that Mr. Hales' selection of five years of high growth with a 5-year transition period to a 20-year sustainable growth period is not found in any textbook and is, therefore, not

an accepted method. The court is not convinced by this argument. As noted, Messrs. Hale and Eyre provided reasonable justifications for their growth and transition periods. It appears from the testimony and authoritative sources that it is acceptable for an appraiser to select the growth and transition periods in a multi-stage DGM. Thus, UPRR's argument that the specific years selected by Messrs. Hales and Eyre in their multi-stage DGMs are arbitrary or unrecognized by the appraisal community is not well taken.

Second, UPRR also complains that the lack of a terminal value renders the Counties' and Commissions' multi-stage DGMs unreliable. On this point the court agrees. It appears from the testimony given during trial that a multi-stage DGM used to evaluate the cost of equity requires a terminal value. The Counties and Commission were unable to point to a single authoritative source to justify their lack of a terminal value. And, although Messrs. Hales and Eyre somewhat persuaded the court with their unique weighting technique on the growth percentages, that weighting technique alone is insufficient to persuade the court that a multi-stage DGM without a terminal value is an acceptable appraisal method.

Third, UPRR argues that the Commission's use of a three-stage model is "a straw man to makes its CAPM cost of equity appear 'generous' and upwardly biased, thus making its single CAPM model appear to favor the taxpayer." (ECF No. 189 at 19 (sealed).) This is a serious allegation against the Commission and the court is not persuaded by this argument. UPRR made this allegation frequently throughout trial but failed to adduce *any* evidence that the lower cost of equity estimates derived from the multi-stage DGM had any influence on the Commission's final determination or was used to trick taxpayers. This assertion also ignores Mr. Hales' three other estimated costs of equity produced by methods other than the multi-stage DGM. Each of these three estimates was lower than the CAPM upon which the Commission placed 100% of its

weight. Yet, UPRR raised no argument that these other estimates were somehow strawmen to allow the Commission's final determination appear generous.

For the foregoing reasons, the court concludes that none of the experts' DGM estimations of the cost of equity are reliably supported by the preponderance of evidence. Dr. Heaton's cost of equity estimates derived from using his single-stage DGM must be disregarded because his growth estimates are not long-term, sustainable growth rates. The DGM models used by Messrs. Hales and Eyre must also be disregarded because they lack a terminal value. Accordingly, the court will disregard all of the DGM-produced cost of equity estimates.

3. Liquidity Adjustment

In his estimation of the cost of equity, Dr. Heaton added a 1% liquidity adjustment (or liquidity premium) to his final value. This ultimately increases his discount rate or WAAC by 1.01%. This 1% change greatly decreases his ultimate valuation determination.[15] Dr. Heaton justifies this liquidity premium by arguing that because he is trying to value UPRR's taxable, tangible, physical assets that he must add a liquidity premium because those physical assets (rail cars, locomotives, property, etc.) "would take weeks to sell, maybe months, maybe years, and would be very expensive." Dr. Heaton justifies this by citing a real estate textbook, concluding that he must "adjust the [cost of equity] rates that [he] got from liquid securities for the illiquidity of the subject property, which is the tangible taxable property." (Tr. 369.) Additionally, Dr. Heaton conducted his own study of Real Estate Investment Trusts ("REIT") to further support this contention.

[15] In fact, if the court removes the 1% liquidity premium, UPRR's income approach value increases by $3.840 billion.

Dr. Bernardo strongly criticized Dr. Heaton's use of a liquidity premium in this context. Specifically, Dr. Bernardo testified that Dr. Heaton's argument that because

> the underlying physical or tangible assets of [UPRR] are illiquid and, therefore, the cost of capital should reflect that illiquidity. . . is actually fundamentally opposed to everything that we teach in corporate finance. In fact, what we teach, and this could not be clearer and all the leading textbooks say the same thing, when you evaluate a physical asset, a tangible asset, the appropriate cost to capital to apply is the rate of return on securities, that is critical, securities with similar risk. That is the whole logic of the capital asset pricing model. What would an investor require and what rate of return could they earn, so to speak, by investing in other securities of similar risk?

(Tr. 1120–21.) In other words, Dr. Bernardo testified that in valuating companies and determining the WAAC, everything is based on the rate of return on securities, stocks and bonds that have the same risk as UPRR so "really what is relevant is the liquidity of the trading stock." (Tr. 1121, 1125.) Dr. Bernardo supported these conclusions by citing two authoritative textbooks that clearly affirm his position. The court finds this reasoning by Dr. Bernardo well-supported and persuasive. Thus, the court will not allow a liquidity adjustment on the theory that there is illiquid, tangible property underlying UPRR's stock.

During the trial, UPRR seemingly abandoned its position that the illiquidity of the tangible assets underlying UPRR's stock is the justification for the liquidity premium. Instead, UPRR argued that the premium should be associated with the risks and costs associated with buying all the shares of UPRR's stock. Specifically, UPRR argued that the costs associated with issuing new stock to raise capital to buy all of UPRR's stock (referred to as floatation costs) justifies the liquidity premium. The court is unpersuaded by UPRR's floatation costs theory.

Flotation costs are defined as "[a] cost incurred in issuing additional stock." *Cost*, Black's Law Dictionary (11th ed. 2019). UPRR argues that these flotation costs would be incurred by the buyer in the hypothetical fair market value transaction and, therefore, the buyer would require a

discount to be applied to the transaction. This may be so, but UPRR has failed to prove these flotation costs should be applied as a liquidity premium added to the WAAC in this instance. Specifically, the court finds that UPRR did not meet its burden of proof because the only evidence of the liquidity premium was Dr. Heaton's testimony regarding his REIT study.

In this REIT study, Dr. Heaton noted that the securities of REITs are more liquid than the actual real estate (i.e., office buildings, malls, etc.) that are owned by REITs. By comparing the returns investors demand for the more liquid REIT's securities to the return's investors would require for the actual sale of the real estate, Dr. Heaton concluded that the return an investor would require was about 1% higher for the less liquid tangible real estate than the more liquid securities in REITs. This evidence, he argues, supports the liquidity premium theory that the property underlying UPRR's stock is the justification for the premium. This is the very theory that Dr. Bernardo soundly disproved. Most fatally, Dr. Heaton's REIT study—being the only evidence to support a liquidity premium—has no relation to floatation costs. Thus, this REIT evidence cannot plausibly support a finding about the necessity of or the correct discount that such flotation costs might command in the hypothetical fair market value transaction. Accordingly, the court finds that UPRR has not demonstrated by the preponderance of evidence that a liquidity premium should be applied in this instance under the flotation costs theory.

For the foregoing reasons, the court finds that a liquidity premium should not be added in this instance.

4. Weighting & Discount Rate Conclusion

Now that the court has resolved the cost of equity and liquidity issues, it can address the proper weighting to give to these cost of equity estimates and make its final finding regarding the WAAC. First, the proper weighting in this case is not difficult. As noted, Rule 62 requires that

the CAPM receive at least 50% weight. Thus, the 10.71 figure listed above will receive at least 50% weight. The question then becomes whether the Commissions' 100% weighting is the most accurate of the possible weightings. In this instance, the court has no other option since it found that each expert's DGMs contained errors that make their resulting costs of equity unreliable. Thus, the court will place 100% weight on the 10.71 figure derived from the corrected CAPM formula detailed above. As noted previously, the cost of debt is 4.31% (tax adjusted to 3.23%) and the capital structure is 17.5% debt and 82.5% equity. When these values are plugged into the WAAC formula,[16] it yields a WAAC or discount rate of 9.40%. This value will be the discount rate used in the Discounted Cash Flow ("DCF") valuation model.

c. Discounted Cash Flow Conclusion

Now that the court has finished evaluating all the inputs that the court will use in the DCF model, it can make a final determination of the total system value of UPRR. The system value calculation is detailed below and is based on the foregoing discussions. To ensure that the court has done its math correctly, the court includes the table below and will detail the calculations.

The court used each predicted cash flow from 2018–28. To get the present value, the projected cash flow is divided by one plus the growth rate by the power of the period to which it corresponds. For example, the 2018 calculation is: ($[redacted] / ((1+ 9.4%) ^ (1)). This calculation yields a present value of $[redacted] This equation continues until the terminal value is calculated.

[16] The equation is: WAAC = [(cost of debt * % of debt * (1 – tax rate)] + [cost of equity * % of equity]. Therefore: 9.40% = [(4.31% * 17.5% * (1 – 25%)] + [(10.71% * 82.5%)].

Income Approach: (Dollars in Thousands)			
Year	**Net Cash Flow**	**Present Value of Cash Flow**	**Period**
2018	[redacted]	[redacted]	1
2019			2
2020			3
2021			4
2022			5
2023			6
2024			7
2025			8
2026			9
2027			10
2028	[redacted]	--	
Terminal Value:	$[redacted]	$[redacted]	
System Value (Before Leased Equipment): $[redacted]			
Value of Operating Leases: $[redacted]			
SYSTEM VALUE: $[redacted]			
Discount Rate: 9.40%		**Growth Rate: 1.95%**	

Thus, the court concludes that the system value for UPRR for the 2018 lien date was $[redacted]. The court may now make any applicable deductions for intangible property, the Utah allocation factor, locally assessed vehicles, and the 4-R Act to arrive at the taxable Utah value.

4. Intangible Property

The issue of separating a railroad's tangible property from its intangible property has long been a difficult endeavor. Indeed, as stated by the Wisconsin Supreme court more than a century ago, "[o]ne might as well try to value the life-blood of a horse, or his capacity to breathe, as try to place a value upon the visible part of railroad property separate from its rights, franchises and privileges." *Chicago & N.W.R. Co. v. State*, 108 N.W. 557, 573 (1906). In this instance, there is no dispute that Utah law governs this issue and UPRR's intangible property is not subject to property tax. The parties do, however, dispute: (i) whether UPRR's trained and

assembled workforce is intangible property that is not subject to property tax;[17] (ii) how to properly value the intangible property; and (iii) how to properly make deductions for intangible property. The court will address each issue in turn.

a. Trained & Assembled Workforce

The issue of whether UPRR's trained and assembled workforce is an intangible property not subject to property tax in Utah is a purely legal question. The parties disagree whether the Utah Supreme Court squarely settled this issue in *T-Mobile USA, Inc. v. Utah State Tax Comm'n*, 254 P.3d 752 (Utah 2011).

In *T-Mobile*, the Utah Supreme Court considered whether "accounting goodwill" was intangible property not subject to taxation under Utah Code § 59-2-102 and article XIII, section 2, clause 5 of the Utah Constitution." *Id.* at 759. The goodwill at issue in the *T-Mobile* case was calculated after "Deutsche Telekom AG acquired the common stock of VoiceStream and transferred the stock to its subsidiary T–Mobile." *Id.* at 760 n.9. The court divided its analysis of the intangible property issue into two parts. First, the Utah Supreme Court evaluated whether accounting goodwill was exempt under the 1998 Utah Property Tax Act (the "1998 Act"), Utah Code sections § 59–2–101 to 1372. *See* Utah Code §§ 59-2-101–1372 (2000). During this first step, the *T-Mobile* court looked to the plain language of Utah's statutory definition of "intangible property" and concluded that accounting goodwill was not "capable of private ownership from tangible property" and, therefore, "goodwill [was] not exempt from property tax under the 1998 Act." *T-Mobile USA, Inc*., 254 P.3d at 761.

[17] The parties do not dispute, and the caselaw supports, that computer software is intangible property not subject to property tax.

Second, after concluding the 1998 Act did not exempt goodwill from taxation, the *T-Mobile* court had to "determine whether goodwill [was] intangible property under the Utah Constitution and, if so, whether the Legislature elected to tax the income from such goodwill." *Id.* at 762. The court summarily concluded that "the legislature chose to tax the income from intangible property" and, therefore, "it could not tax the intangible property itself." *Id.* at 762–63. Thus, the court was left to determine if goodwill was, in fact, intangible property. To make this determination, the *T-Mobile* court looked to the plain meaning of intangible property: "The meaning of 'intangible property' is clear and unambiguous. As used in the law of taxation, the generally accepted definition of intangible property, is property that has no intrinsic and marketable value, but is merely the representative or evidence of value, such as certificates of stock, bonds, promissory notes, copyrights, and franchises." *Id.* at 762 (citations and internal formatting and quotation marks omitted). The court concluded that "goodwill is consistent with this definition" and, therefore, it was not subject to property tax in Utah. *Id.*

After the *T-Mobile* decision, UPRR raised the same issue—whether UPRR's trained and assembled workforce is intangible property—in *Union Pacific R.R. Co. v. Utah State Tax Comm'n*, Case No. 090700830, Memorandum Decision and Order (May 1, 2013) [hereinafter, *Judge Morris Decision*]. In that case, Judge Morris relied upon the *T-Mobile* framework in determining that UPRR's assembled workforce was not exempt from property tax. Specifically, Judge Morris found that UPRR's trained workforce was not intangible because: (1) it "fails the test of ownership separate from that of tangible property"; (2) "is not transferable"; (3) "does not arise from contract or legal rights"; (4) "does not appear in or share characteristics with the listed types of exempt intellectual property; and (5) it is "not accounting goodwill, nor should it be valued apart from accounting goodwill." *Id.* at 57. Thus, the *Judge Morris Decision* concluded

that "it is not necessary to value or deduct any value for Union Pacific's trained and assembled workforce." *Id.*

UPRR argues that the *Judge Morris Decision* stopped short of performing the entire *T-Mobile* intangible property inquiry because the decision did not address whether a trained and assembled workforce is exempt from property tax under the Utah Constitution. As the court noted, *T-Mobile's* constitutional analysis looked beyond the statutory meaning of intangible property to the common and general understanding of the term "intangible property." *T-Mobile USA, Inc.*, 254 P.3d at 762. The court disagrees with UPRR that the *Judge Morris Decision* failed to perform this analysis, and the court finds that opinion's reasoning persuasive on this issue.

Although the reasoning was not as obvious as it could have been, the *Judge Morris Decision* addresses the constitutional issue by discussing whether an assembled workforce can properly be valued apart from accounting goodwill. Specifically, the *Judge Morris Decision* delves into the FASB guidelines that discuss whether an asset is identifiable intangible property or unidentifiable intangible property. *See Judge Morris Decision*, at 56. Judge Morris cites the *T-Mobile* court's footnote discussing the FASB standards for how to determine if "[a]n intangible asset can be recognized apart from goodwill." *Id.* (citing *T-Mobile USA, Inc.*, 254 P.3d at 760 n.8). Under these FASB standards, an assembled workforce is not an identifiable intangible asset but rather is an unidentifiable intangible asset that is subsumed by goodwill. Thus, the *Judge Morris Decision* correctly concluded that an assembled workforce "has more in common with accounting goodwill, which under Utah law usually refers to acquired goodwill that is reported as goodwill on the books and records of a taxpayer for financial reporting purposes." *Judge Morris Decision*, at 57 (citation and formatting omitted). According to Judge Morris, since an

assembled workforce is essentially a component of accounting goodwill, it was improper under FASB standards for UPRR to value the workforce independently from accounting goodwill. The court agrees with the *Judge Morris Decision's* reasoning for two reasons.

First, the court can easily decide that a trained and assembled workforce is not listed as an intangible asset under Utah Code §59-2-102 and, therefore, fails the first consideration from *T-Mobile*. *See T-Mobile USA, Inc.*, 254 P.3d at 761; *see also* Utah Code § 59-2-102 (16), (19) (defining "goodwill" and "intangible property"). Thus, UPRR's workforce does not meet the statutory definition of "intangible property" because it is not "capable of private ownership separate from" UPRR's tangible property. Utah Code § 59-2-102 (16), (19).

Second, the court finds that UPRR's workforce is not intangible property under the constitutional consideration framework in *T-Mobile*. *T-Mobile USA, Inc.*, 254 P.3d at 762–64. The court finds support for this conclusion in the *T-Mobile* decision itself. As an important refresher, the *T-Mobile* decision revolves around a deduction for accounting goodwill following an acquisition. *Id.* at 760 n.9. Because there was an acquisition, the goodwill was measurable and reported on the books. That is not what occurred here and that is why UPRR's workforce is not a proper deduction under the constitutional consideration.

In making the constitutional determination, the court in *T-Mobile* looked to the Financial Accounting Standards Board Accounting Standards Codification ("FASB") for guidance. Under FASB, "[a]n intangible asset can be recognized apart from goodwill if (1) 'control over the future economic benefits of the asset results from contractual or other legal rights' or (2) it 'is capable of being divided and sold, transferred, licensed, rented, or exchanged.'" *T-Mobile USA, Inc.*, 254 P.3d at 760, n.8 (citing the FASB Standards Codification). Thus, the Utah Supreme Court acknowledged that the FASB standards—and, to some extent, Utah law—do not permit

some intangibles to be recognized separate from goodwill. In this context, UPRR's trained and assembled workforce fails both the transferability and legal-contractual requirements to be recognized apart from goodwill.

This conclusion then begs the question; if goodwill subsumes UPRR's workforce, should the workforce nonetheless be exempt from property taxation as goodwill? The court finds such an exemption would be improper because FASB indicates that when an intangible asset does not satisfy the contractual-legal or separability requirements that the intangible property should not—and cannot—be valued apart from goodwill. Thus, the court finds that UPRR improperly valued its workforce as being separate from goodwill and, therefore, a deduction would similarly be improper. Additionally, the court is unaware of any situation where Utah courts have permitted an intangible property deduction for property tax purposes outside of the context when goodwill was reported in connection to a merger or acquisition. Without such support, the court finds that Utah law does not permit UPRR's workforce deduction in this context.

b. Valuing & Deducting Intangibles

Having concluded that UPRR's workforce is not an intangible asset, the court will focus only on Messer. Eyre and Riley's competing valuations of UPRR's custom computer software.[18] UPRR's expert, Mr. Riley, used a replacement cost new less depreciation ("RCNLD") method to estimate the value of the custom computer software. Mr. Riley relied upon two databases to come up with estimates about the person-months that would be required to replace the software. The databases are the construction cost model known as COCOMO and the other is the Software Lifecycle Management, or SLIM database. Mr. Riley testified that these databases are generally

[18] The Commission and Dr. Heaton both relied upon the appraisal of the computer software prepared by Mr. Riley to remove $[redacted] of custom software from their unit valuation estimates as exempt intangible property.

accepted in the industry for valuation purposes. To arrive at his conclusion about the RCNLD value of UPRR's software, Mr. Riley analyzed the costs that would be associated with replacing the software and multiplied those costs by the number of person-months that would be required to create the same software. Mr. Riley also considered and removed depreciation or obsolescence to arrive at his fair market conclusion.

Mr. Eyre took a different approach and made an intangible property deduction for the software at its contributory value through the use of the market-to-book ratio. In Mr. Eyre's opinion, this is the correct method because "non-capitalized software that [UPRR] reported. . . is not exempted intangible property" while "capitalized software would constitute exempt property." (Tr. at 1070). In employing this method, Mr. Eyre arrived at a contributory value of $695,132,194 for the capitalized custom software in his income approach and $752,000,000 for his EBITDA approach.

The Counties argue that the RCNLD method is improper because: (1) the software was not capitalized on the books and only booked intangibles may be removed from the unit value; (2) the values of the software have already been removed from UPRR's system value in the way of expenses incurred; and (3) Mr. Riley's RCNLD should not be removed from a system value derived from an income approach. The court will address each argument in turn.

First, the court rejects Mr. Eyre's contention that it is improper to removed non-capitalized intangible property. The *Judge Morris Decision* rejected this same argument, stating that "the capitalization of costs relating to intangible property per se is not a prerequisite to either the Constitutionally or statutorily required removal of intangible properties from unitary property prior to assessment." *Judge Morris Decision*, at 52. The court finds the *Judge Morris Decision* persuasive on this issue and, therefore, rejects Mr. Eyre's contention.

Second, the court similarly rejects Mr. Eyre's contention that the removal of intangibles using the RCNLD would be a double-deduction because some of the expenses to develop software were deducted as expenses in Dr. Heaton's cash flow analysis. Again, this same argument was rejected in the *Judge Morris Decision* because it "fail[s] to recognize the difference between operating expenses, which are part of the calculation of NOI, and original development costs, which may or may not be capitalized." *Id.* The court agrees with that determination. This does not mean that Mr. Riley's RCNLD value does not include some value that has been expensed. The Counties, however, did not demonstrate that significant double-counting occurred or how much of UPRR's operating expenses were related to maintenance versus development costs. Thus, the court is not convinced that—according to the evidence presented in this case—this is an adequate basis to reject Mr. Riley's RCNLD value for computer software.

Third, the Counties argue that it is improper to remove an RCNLD value from a system value derived from an income approach. The court again agrees with the *Judge Morris Decision* that because both the RCNLD and income approach arrive at fair market value that there is no mismatch problem. *Judge Morris Decision*, at 54. Similarly, the Counties argue that the intangible property needed to be removed from the system value on the same basis as they contribute to the system value—known as the contributory value. This contributory value works from the market-to-book ratio, which only captures the cost of the intangible property reported on the balance sheet. The court believes that only accounting for the reported value of intangible property would tend to undervalue the computer software. Accordingly, the court finds that Mr. Eyre's market-to-book value is unreliable because it would undervalue the computer software.

For the foregoing reasons, the court finds that Mr. Riley's RCNLD value of the intangible computer software is the most accurate of the values presented during trial. The court will accordingly use the $[redacted] value for the computer software.

IV. CONCLUSION

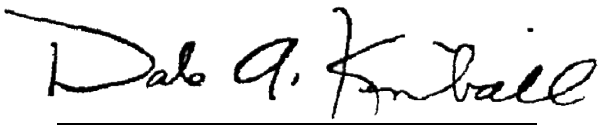
The court has now resolved all the factual and legal issues presented during trial. Thus, the court can compile all its findings and determine UPRR's 2018 Utah taxable value. According to the foregoing, the court concludes that UPRR's final Utah taxable value is $1,653,767,440. This conclusion is only $100,808,390 more than the Commission's Utah taxable value, or a 94% ratio of UPRR's assessed value to its true market value ($1,552,959,050 / $1,653,767,440 = 93.9%). This ratio does not exceed the 5% threshold as required by the 4-R Act. Accordingly, there was no discrimination and UPRR is not entitled to a deduction under the 4-R Act.[19]

	Court's Calculation (Modifying Hales' Income Approach)	**Commission's Original Calculation**
Correlated System Value	[redacted]	[redacted]
LESS Computer Software	[redacted]	[redacted]
Adjusted System Value	[redacted]	[redacted]
TIMES Utah Allocation Factor	[redacted]	[redacted]
Utah Market Value	**$1,659,173,708**	**$1,683,918,000**
LESS Locally Assessed Vehicles	($5,406,268)	($5,406,268)
Utah Assessment	**$1,653,767,440**	**$1,678,511,732**
LESS 4-R Act Deduction (7.48%)	N/A	($125,552,678)
Utah Taxable Value	**$1,653,767,440**	**$1,552,959,050**

[19] To the extent that any of the court's math is incorrect, the parties are encouraged to cooperate to correct the court's math before filing any motions.

DATED this 8th day of June 2021.

BY THE COURT:



DALE A. KIMBALL
United States District Judge